



Annual **WATER**
QUALITY
REPORT

Reporting Year 2011



Presented By _____
Mission Springs
Water District

PWS ID#: DHS: 3310008; WPSV: 3310078; PSC: 3310081

Meeting the Challenge

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2011.

Since 1953, Mission Springs Water District (MSWD) has been dedicated to producing high-quality, award-winning drinking water that meets all state and federal standards. We continually strive to adopt new methods for efficiently delivering the best-quality drinking water to you at the lowest possible price. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

In addition to providing high-quality drinking water to more than 30,000 residents, MSWD has dedicated itself to protecting regional groundwater supplies. Over the past decade, MSWD has obtained millions of dollars through competitive grants to build sewer infrastructure for the purpose of removing septic tanks that threaten groundwater.

MSWD is also committed to education. As a Groundwater Guardian Affiliate, the District participates in the K-12 school system by hosting tours and educating students about protecting their watershed, conservation, and the renewable cycle of water. Through public education, transparency, and a commitment to excellence, MSWD serves the community in more ways than water!

Please share with us your thoughts or concerns about the information in this report. After all, well-informed customers are our best allies.

Community Participation

MSWD is a not-for-profit public agency created in 1953 by the community to serve the community.

The District is governed by a five-member board of directors elected by the public. You are invited to participate in its regular board meetings. They are held the third Monday of every month beginning at 3:00 p.m., with study sessions held the Thursday prior to the board meeting also at 3:00 p.m. Both meetings are held at the MSWD offices, located at 66575 Second Street in Desert Hot Springs, California. The parking lot and access to the meetings is available from First Street. Customers may also e-mail the Board of Directors at board@mswd.org.

Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; **Inorganic Contaminants**, such as salts and metals, that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; **Pesticides and Herbicides**, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems; **Radioactive Contaminants**, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

QUESTIONS?

For more information on water quality or this report, please contact John Soulliere at (760) 329-5169 ext.144, or by e-mail at info@mswd.org. You can also find MSWD on the World Wide Web at www.mswd.org.

Source Water Assessment

Source water assessments for the District's wells were completed by May 2003, as required by law. The assessments indicated that the wells are not being impacted by surface development. Although no manmade contaminants have been detected, the Source Water Assessments found that septic systems, illegal dumping, and chemical/petroleum lines are potential sources of contamination. Assessment reports are available for review at MSWD's administrative office located at 66575 Second Street, Desert Hot Springs, California, 92240.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

Where Does My Water Come From?

MSWD provides high-quality drinking water to a 135 square-mile service area which includes the communities of Desert Hot Springs, North Palm Springs, West Garnet, Desert City, portions of the Desert Edge Community, Painted Hills, Mission Lakes Country Club, and a portion of Palm Springs. The service area also encompasses homes and businesses in Riverside County west of Corkill Road and north of Dillon Road to the Riverside-San Bernardino county line.

For the Desert Hot Springs area, the Mission Creek Groundwater Sub-basin (Aquifer) provides the majority of the municipal water supply. It is bordered on the north by the Mission Creek Fault and on the south by the San Andreas Fault, commonly referred to as the Banning Fault, which separates it from the Garnet Sub-basin. Nine deep water wells within the Mission Creek Sub-basin and one within the Garnet Sub-basin pump into the District's distribution system.

MSWD's western-most service area includes the West Palm Springs Village and Palm Springs Crest areas. These areas receive water taken from the Cabazon Groundwater Basin, which is in the eastern portion of the San Geronio Pass Sub-basin.

To learn more about our watershed, visit the U.S. EPA's "Surf Your Watershed" Web site at www.epa.gov/surf/ and search for the Salton Sea Watershed.

Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Recent Water Quality Questions

There has been a lot of media attention about the topic of the safety of public water systems and water quality over the past year. Specifically, discussions have been raised regarding a naturally occurring constituent found in the ground waters of the Coachella Valley called Hexavalent Chromium, or Chromium 6.

In light of this attention, significant pressure has been placed upon state and federal public health agencies to establish a new Maximum Contaminant Level (MCL) for Chromium 6. Currently, Chromium 6 is measured in drinking water as Total Chromium, which includes Trivalent Chromium (Chromium 3) and Hexavalent Chromium (Chromium 6). The MCL for Chromium is set at 50 parts per billion (ppb) in California.

For perspective, one part per billion is equal to about one ounce in 7.8 million gallons. The current California Public Health Goal (PHG) is set at 0.02 ppb. It appears that a misunderstanding in the difference between this PHG and the MCL has led to some confusion and raised concerns about the safety of regional water supplies.

The fact sheet entitled “Draft Public Health Goal for Hexavalent Chromium,” published by the California Office of Environmental Health, states: “A PHG is NOT a boundary line between a ‘safe’ and a ‘dangerous’ level of a contaminant. Drinking water can still be acceptable for public consumption if it contains contaminants at levels higher than the PHG.”

Further, the Chromium-6 Fact Sheet produced by the California Department of Public Health (www.cdph.ca.gov) states: “A drinking water sample with a detection of hexavalent chromium above the PHG of 0.02 ppb does not necessarily represent a public health concern.”

Mission Springs Water District supports a reasonable, scientifically based approach to regulation of all potential contaminants in drinking water and will continue to comply with state and federal regulations for MCLs. However, with increased regulation comes increased costs to produce water for public consumption, hence, higher costs passed on to the customer. Because the potential costs of treatment for Chromium 6 are significant, the establishment of a new MCL must be determined based upon the probability of actual benefit to public health.

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic constituents. The tables below show only those constituents that were detected. The mere presence of a particular constituent in water is not indicative of the healthfulness of that water. This is the reason for establishing “Maximum Contaminant Levels” or MCLs. According to www.EPA.gov, an MCL is “the highest level of a contaminant that is allowed in drinking water.” Hence, a constituent found in water at a level below an MCL is not considered unhealthy for public consumption.

The state requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES											
				W. Palm Springs Village		Palm Springs Crest		Desert Hot Springs			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2011	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	0.52	0.30–1.02	0.62	0.20–0.92	0.51	0.12–1.07	No	Drinking water disinfectant added for treatment
Chromium (ppb)	2011	50	(100)	0.00	NA	NA	NA	2.3	0.0–12	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	2011	2.0	1	0.68	0.61–0.76	1.35	1.3–1.4	0.68	0.49–0.83	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2007	15	(0)	1.30	0–2	0.9 ¹	0.9–0.9 ¹	1.00	0–3.3	No	Erosion of natural deposits
Haloacetic Acids (ppb)	2011	60	NA	ND	NA	NA	NA	0.75	ND–1.5	No	By-product of drinking water disinfection
Nitrate [as nitrate] (ppm)	2011	45	45	11	10.00–12.00	3.65	3.6–3.7	2.95	0–5.4	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2011	80	NA	3.8	NA	3.8	NA	8.9	2.5–15.3	No	By-product of drinking water disinfection
Uranium (pCi/L)	2011	20	0.43	ND	30–34 ²	ND	NA	7.1 ³	0–20 ³	No	Erosion of natural deposits
Tap water samples were collected for lead and copper analyses from sample sites throughout the community											
				W. Palm Springs Village		Palm Springs Crest		Desert Hot Springs			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2011	1.3	0.3	0.08	0/10	0.29	0/11	0.18	0/38	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2011	15	0.2	<5 ppb	0/10	11	0/11	<5 ppb	0/38	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES											
				W. Palm Springs Village		Palm Springs Crest		Desert Hot Springs			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2011	500	NS	21	15–27	9.95	7.9–12	20.51	7.1–60	No	Runoff/leaching from natural deposits; seawater influence
Odor–Threshold (Units)	2011	3	NS	1.0	1.0–1.0	1.0	1.0–1.0	1.0	1.0–1.0	No	Naturally occurring organic materials
Specific Conductance (µs/cm)	2011	1,600	NS	530	430–630	450	430–470	637	330–870	No	Runoff/leaching from natural deposits
Sulfate (ppm)	2011	500	NS	40.5	20–61	22	20–24	146.8	35–230	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2011	1,000	NS	325	270–380	275	260–290	393	190–540	No	Runoff/leaching from natural deposits
Turbidity (Units)	2011	5	NS	0.1	0.1–0.1	0.4	0.1–0.1	0.13	0.1–0.2	No	Soil runoff

UNREGULATED SUBSTANCES										
			W. Palm Springs Village		Palm Springs Crest		Desert Hot Springs			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE	
Chromium VI [Hexavalent Chromium] (ppb)	2007		5.4	NA	3.6	2.5–4.7	9.6	1.6–17	NA	
Hardness (ppm)	2011		215	170–260	195	190–200	181.8	59–320	NA	
Sodium (ppm)	2011		29	26–32	21	18–24	62.5	47–89	Leaching from natural deposits	
Vanadium (ppb)	2011		10.25	6.5–14	9.4	7.8–11	18.73	8.7–63	NA	

¹ Sampled in 2011.
² Before treatment.
³ Sampled in 2007.

Definitions

AL (Regulatory Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste and appearance of drinking water.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. EPA.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard

pCi/L (picocuries per liter): A measure of radioactivity.

PDWS (Primary Drinking Water Standard): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

PHG (Public Health Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).